

Subpart 111.60—Wiring Materials and Methods

§ 111.60-1 Cable construction and testing.

(a) Each marine shipboard cable must meet all the construction and identification requirements of either IEEE Std 45, IEC 92-3, MIL-C-24640A, or MIL-C-24643A and the respective flammability tests contained therein and be of a copper stranded type.

NOTE TO PARAGRAPH (a): MIL-C-915 cable is acceptable only for repairs and replacements in kind. MIL-C-915 cable is no longer acceptable for alterations, modifications, conversions, or new construction. (See § 110.01-3 of this chapter).

(b) Each cable constructed to IEC 92-3 must meet the flammability requirements of IEC 332-3, Category A.

(c) Electric cable that has a polyvinyl chloride insulation with a nylon jacket (Type T/N) must meet the requirements for polyvinyl chloride insulated cable in section 18 of IEEE Std 45, except—

(1) The thickness of the polyvinyl chloride insulation must meet UL 83 for type THWN wire;

(2) Each conductor must have a nylon jacket;

(3) The thickness of the nylon jacket must meet UL 83 for type THWN wire;

(4) The material of the nylon jacket must meet ASTM D 4066-94b Type VIII;

(5) The cable must have identification provided by a durable printing or embossing on the cable jacket or a marker under the cable jacket that gives, at intervals not exceeding 610 mm (24 inches), the information required by section 18.8 of IEEE Std 45; and

(6) Type T (T/N) insulations are limited to a 75° C maximum conductor temperature rating.

(d) Electrical cable regardless of construction must meet, at a minimum, all of the performance and marking requirements of section 18 of IEEE Std 45.

(e) Medium voltage electric cable must meet the requirements of IEEE Std 45 and UL 1072, where applicable, for cables rated above 5,000 volts.

(f) Direct current electric cable, for industrial applications only, may be

applied in accordance with IADC-DCCS-1/1991.

[CGD 94-108, 61 FR 28280, June 4, 1996, as amended at 62 FR 23908, May 1, 1997]

§ 111.60-2 Specialty cable for communication and RF applications.

Specialty cables that cannot pass the flammability test contained in IEEE Std 45, IEEE Std 1202, ANSI/UL 1581 test VW-1, or IEC 332-3 Category A due to unique construction properties, such as certain coaxial cables, must—

(a) Be installed physically separate from all other cable; and

(b) Have fire stops installed—

(1) At least every 7 meters (21.5 feet) vertically, up to a maximum of 2 deck heights;

(2) At least every 15 meters (46 feet) horizontally;

(3) At each penetration of an A or B Class boundary;

(4) At each location where the cable enters equipment; or

(5) In a cableway that has an A-60 fire rating.

[CGD 94-108, 61 FR 28280, June 4, 1996]

§ 111.60-3 Cable application.

(a) Cable constructed in accordance with IEEE Std 45 must meet the cable application section 19 of IEEE Std 45. Cable constructed in accordance with IEC 92-3 must meet the requirements of section 19 of IEEE Std 45 except 19.6.1, 19.6.4, and 19.8. Cable constructed in accordance with IEC 92-3 must comply with the ampacity values of IEC 92-352, Table 1.

(b) Type T/N cables must meet section 19 of IEEE Std 45 for Type T insulation.

(c) Cables constructed in accordance with IEEE Std 45 must be derated in accordance with Table A6, Note 6 of IEEE Std 45. Cables constructed in accordance with IEC 92-3 must be derated in accordance with IEC 92-352, paragraph 8. MIL-C-24640A and MIL-C-24643A cable must be derated in accordance with MIL-HDBK-299(SH).

(d) Cables for special applications defined in section 19 of IEEE Std 45 must meet the provisions of that section.

[CGD 94-108, 61 FR 28280, June 4, 1996, as amended at 62 FR 23908, May 1, 1997]